

Type I and II Ground Disturbing Categorical Exclusion Action Classification Form

STIP Project No.	B-5876
WBS Element	48070.1.1
Federal Project No.	NHP-0074(181)

A. Project Description:

The proposed project involves replacing Bridge No. 83 and Bridge No. 84 on US 74 Bypass over the Second Broad River in Rutherford County (see Figure 1). The replacement structures will be dual bridges each approximately 288 feet long (see Figure 2). The 4-lane divided facility will have two 38-foot wide (clear roadway width) bridges with two 12-foot lanes, 10-foot outside shoulder, and a 4-foot median shoulder. The bridge lengths are based on preliminary design information and are set by hydraulic requirements. The roadway grade will initially be set such that the proposed low chord matches the existing low chord. Bridge No. 83 and Bridge No. 84 will be replaced using phased construction, maintaining two lanes of traffic eastbound and two lanes of traffic westbound throughout construction. The proposed westbound US 74 Bypass structure will be constructed north of existing westbound structure. Westbound traffic will be shifted onto the newly constructed westbound bridge before the existing westbound structure is removed. While the existing eastbound US 74 Bypass traffic continues its normal pattern, the proposed eastbound structure will be constructed with the same median width as the existing eastbound US 74 Bypass structure. The design speed will be 70 mph using AASHTO guidelines.

Project construction will extend approximately 770 feet east and 686 feet west from the bridge. The US 74 Bypass approaches will include four 12-foot lanes with a 46-foot median and eight-foot shoulders (13-foot with guardrail). The roadway will be designed as a principal arterial using AASHTO guidelines.

B. Description of Need and Purpose:

The purpose of this project is to replace functionally obsolete bridges. Bridge No. 83 was built in 1968 and is 276 feet long with a 28 foot clear roadway width. Bridge No. 84 was built in 1968 and is 274 feet long with a 28 foot clear roadway width. The superstructure of both bridges is reinforced concrete floors on steel I-beams. The substructure of both bridges consists of reinforced concrete caps on concrete piles and columns.

NCDOT Structures Management Unit records indicate Bridge No. 83 has a sufficiency rating of 67.78 and Bridge No. 84 has a sufficiency rating of 66.78 out of 100 for a new structure. The bridges are considered functionally obsolete due to a deck geometry of 3 out of 4 by Federal Highway Administration (FHWA) standards.

Components of the concrete substructure and steel superstructure have experienced an increasing degree of deterioration that can no longer be addressed by maintenance activities. US 74 Bypass at Bridge No. 83 and Bridge No. 84 has an Average Annual Daily Traffic (AADT) volume of 19,000 vehicles per day (vpd) for the year 2016 and future traffic of 24,100 AADT for the year 2040. Replacement of the bridges will improve traffic operations.

C. Categorical Exclusion Action Classification: (Check one)

TYPE I A

D. Proposed Improvements

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e) (1-6).

E. Special Project Information

Build New Bridge on Existing Alignment – The new bridges could be built on the existing alignment of Bridge No. 83 and Bridge No. 84 with crossovers, but the limits of construction would extend beyond the limits of the Old Caroleen Road interchange. This would cause a weaving issue for the eastbound on-ramp that merges to the mainline alignment.

Brownfield site- There is the (Andale) Brownfield site located south of Bridge No. 83 and 84. Current designs show this site will not be impacted by the proposed bridge replacement project. The limits of the Brownfield area are confined to the existing property limit.

Preferred Alternative:

Phased Construction - Bridge No. 83 and Bridge No. 84 will be replaced using phased construction, maintaining two lanes of traffic eastbound and two lanes of traffic westbound throughout construction. The proposed westbound US 74 structure will be constructed north of the existing westbound structure. Westbound traffic will be shifted onto the newly constructed westbound bridge before the existing westbound structure is removed. While the existing eastbound US 74 traffic continues its normal pattern, the proposed eastbound structure will be constructed with the same median width as the existing structure. The proposed bridges would each be 288 feet long. This alternative is preferred because staged construction would minimize impacts to regional and local mobility, access to local businesses and homes, and EMS operations. NCDOT concurs that this is the preferred alternative.

Cost:

The estimated costs for the project are as follows:

Construction Cost: \$9,800,000

Public Involvement:

Landowner notification letters were mailed on February 16, 2016 to all property owners affected by this project. No comments have been received to date.

F. Project Impact Criteria Checklists:

<u>Type I & II - Ground Disturbing Actions</u>			
<u>FHWA APPROVAL ACTIVITIES THRESHOLD CRITERIA</u>			
If any of questions 1-7 are marked "yes" then the CE will require FHWA approval.		Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If any of questions 8 through 31 are marked "yes" then additional information will be required for those questions in Section G.			
<u>Other Considerations</u>		Yes	No
8	Does the project result in a finding of "may affect not likely to adversely affect" for listed species, or designated critical habitat under Section 7 of the Endangered Species Act (ESA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11	Does the project impact waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Does the project include a Section 106 of the NHPA effects determination other than a no effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Other Considerations (continued)</u>		Yes	No
15	Does the project involve hazardous materials and/or landfills?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP or the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP) (where applicable)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is the project considered a Type I under the NCDOT's Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F

Response to Question 8:

Northern long-eared bat (NLEB) is listed as a threatened species in Rutherford. NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.

Dwarf-flowered Heartleaf- Prior to construction, additional surveys are needed for this species. The September 2016 Natural Resources Technical Report (NRTR) for TIP B-5876 found that marginally suitable habitat for this species exists within the study area. No dwarf-flowered heartleaf was observed during March 28, 2016 field surveys. However, a March 1, 2016 query of NCNHP records using the online North Carolina Natural Heritage Data Explorer indicated one dwarf-flowered heartleaf occurrence within 1.0 mile of the study area. The element occurrence (#21348) is dated May 26, 2015, and has a high location accuracy. The NRTR includes a biological conclusion of “No Effect”. However, based on NCDOT recommendations, additional surveys are needed for this species prior to construction to confirm the biological conclusion of “No Effect”.

Response to Question 16:

Rutherford County is a participant in the National Flood Insurance Program, administered by the Federal Emergency Management Agency (FEMA). The effective FEMA floodplain mapping indicates that this crossing of the Second Broad River is located within a flood hazard zone designated as Zone AE, for which 100-year base flood elevations have been established in a Flood Study.

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program to determine the status of the project with regard to applicability of NCDOT’s Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

This project involves construction activities on or adjacent to a FEMA-regulated stream. Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon project completion certifying the drainage structure(s) and roadway embankment located within the 100-year floodplain were built as shown on the construction plans, both horizontally and vertically.

Response to Question 30: Farmland soils eligible for protection under the Farmland Protection Policy Act (FPPA) are present within the project study area. A preliminary screening of farmland conversion impacts in the project area has been completed and a total score of 42 out of 160 points was calculated for the B-5876 project site. Since the total site assessment score does not exceed the 60-point threshold established by NRCS, farmland conversion impacts may be anticipated, but are not considered notable.

H. Project Commitments

Rutherford County
Bridge No. 83 and No. 84 on US 74 Bypass over the Second Broad River
Federal Project No. NHP-0074(181)
WBS No. 48070.1.1
TIP No. B-5876

Hydraulics Unit, Division 13 Construction- FEMA

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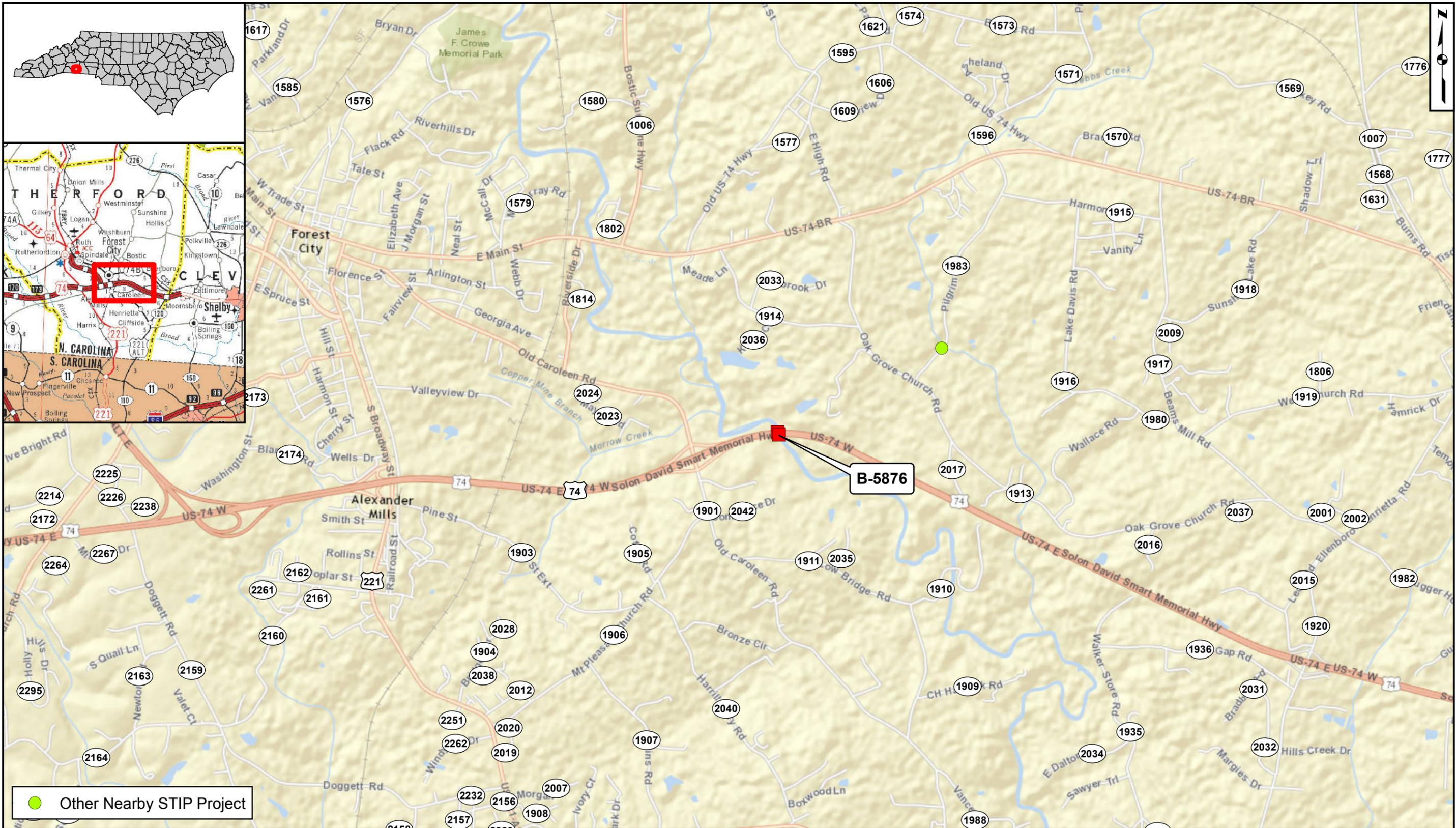
NCDOT Project Delivery- Environmental Analysis Unit (EAU)

Northern long-eared bat (NLEB) is listed as a threatened species in Rutherford. NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. § 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.

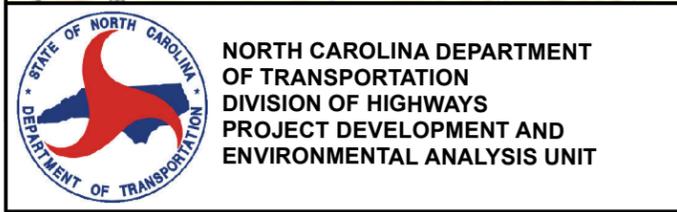
Dwarf-flowered Heartleaf- Prior to construction, additional surveys are needed for this species. The September 2016 Natural Resources Technical Report (NRTR) for TIP B-5876 found that marginally suitable habitat for this species exists within the study area. No dwarf-flowered heartleaf was observed during March 28, 2016 field surveys. However, a March 1, 2016 query of NCNHP records using the online North Carolina Natural Heritage Data Explorer indicated one dwarf-flowered heartleaf occurrence within 1.0 mile of the study area. The element occurrence (#21348) is dated May 26, 2015, and has a high location accuracy. The NRTR includes a biological conclusion of "No Effect". However, based on NCDOT recommendations, additional surveys are needed for this species prior to construction to confirm the biological conclusion of "No Effect".

Geo-environmental- Brownfield Site

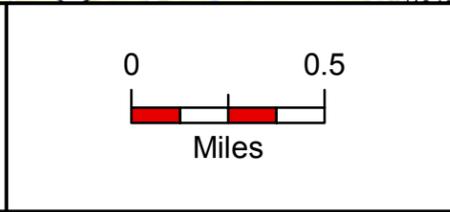
There is the (Andale) Brownfield site located south of Bridge No. 83 and 84. Current designs show this site will not be impacted by the proposed bridge replacement project. If plans change in the area and the site is impacted further coordination will be needed. The limits of the Brownfield area are confined to the existing property limit.



● Other Nearby STIP Project

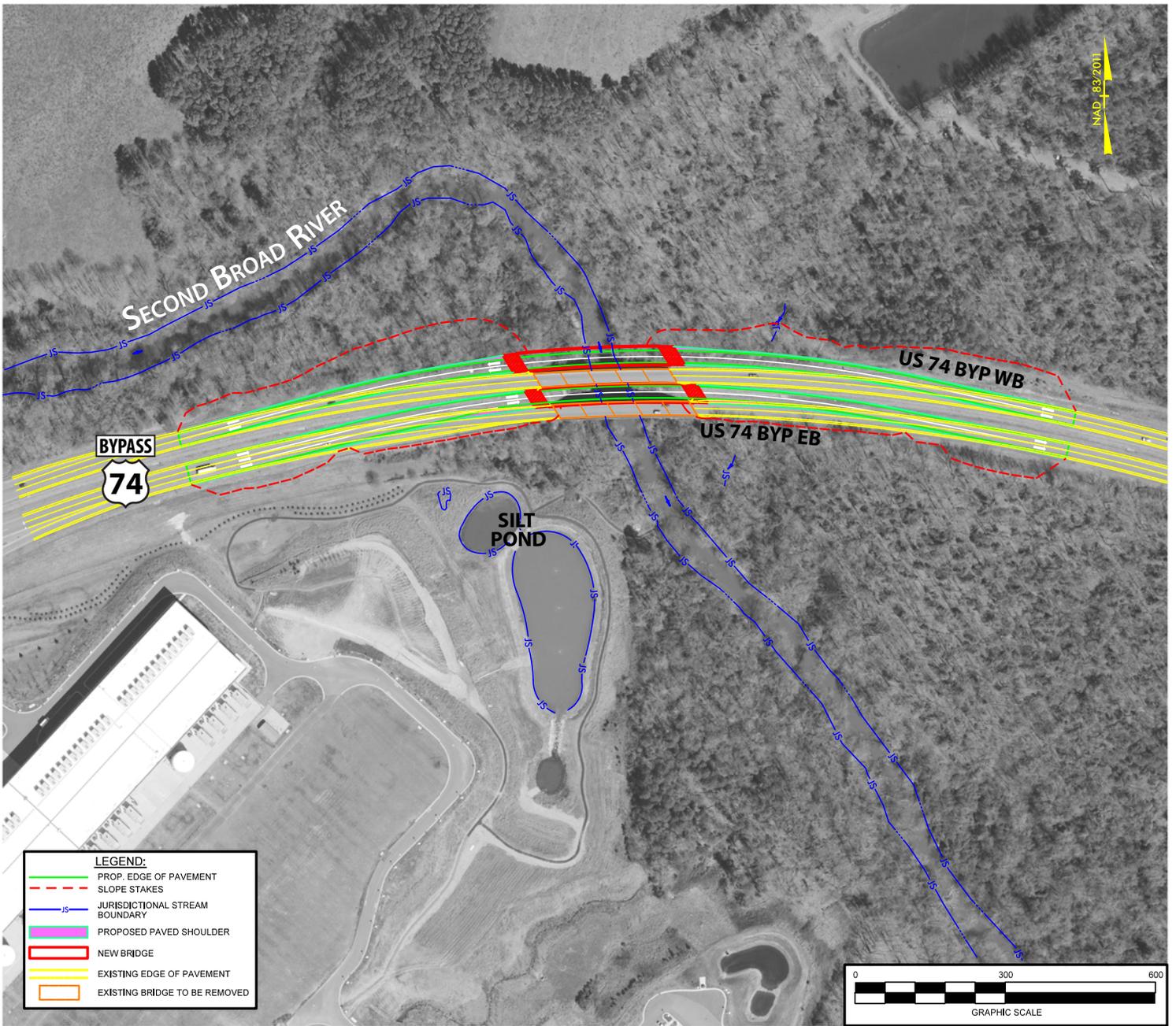


VICINITY MAP
 Replace Bridge No. 83 & 84 on US 74 BYP
 over Second Broad River in Rutherford County
 TIP Project B-5876



Div: 13 TIP# B-5876
 Date: DECEMBER 2015

Figure 1



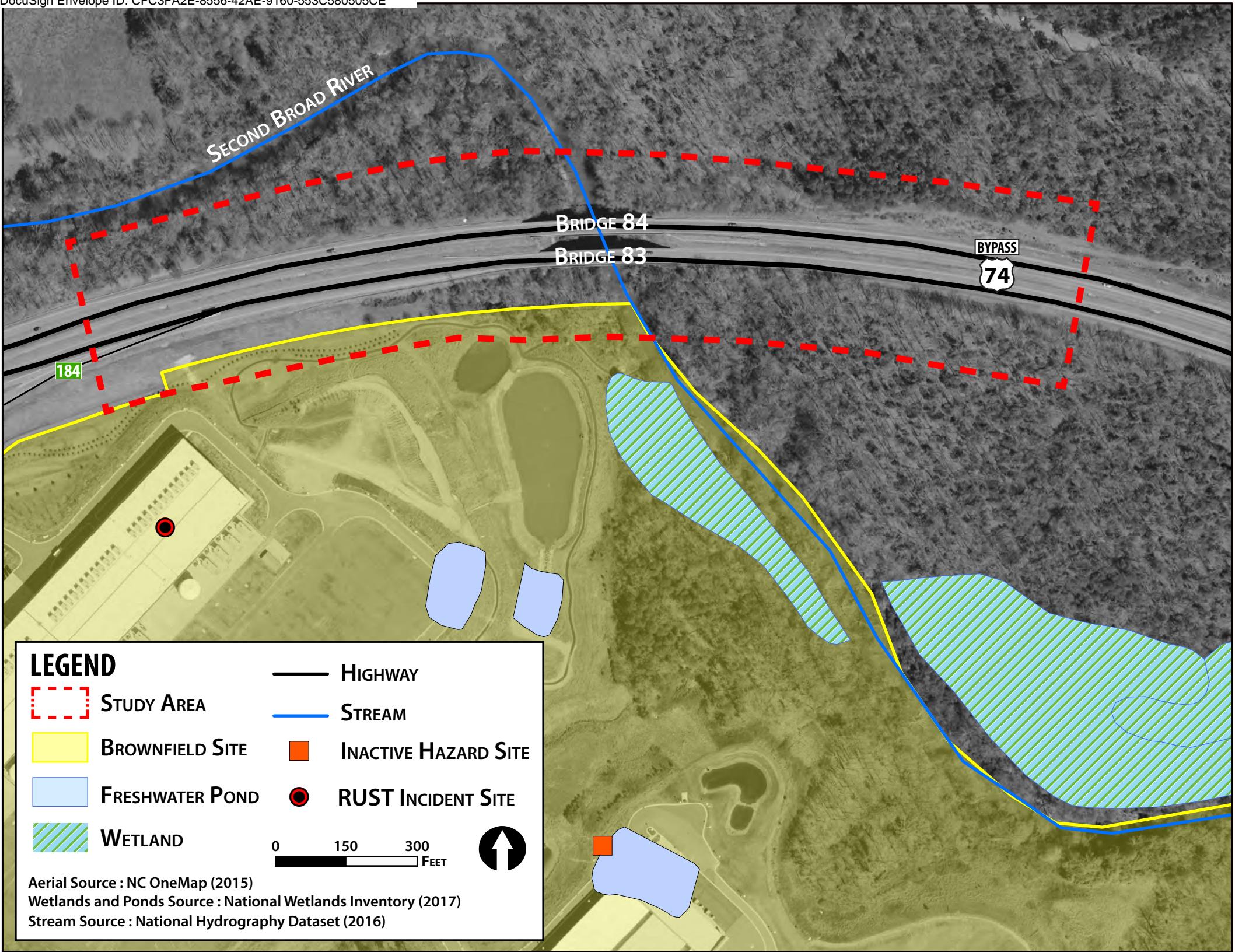
Proposed Improvements

Replace Bridge No. 83 and No. 84 on
US 74 Bypass over the Second Broad River
with Phased Construction

Rutherford County

B-5876

Figure 2



LEGEND

 STUDY AREA	 HIGHWAY
 BROWNFIELD SITE	 STREAM
 FRESHWATER POND	 INACTIVE HAZARD SITE
 WETLAND	 RUST INCIDENT SITE

0 150 300 FEET 

Aerial Source : NC OneMap (2015)
 Wetlands and Ponds Source : National Wetlands Inventory (2017)
 Stream Source : National Hydrography Dataset (2016)

Environmental Constraints Map
 Replace Bridge No. 83 & No. 84 on
 US 74 Bypass over the Second Broad River
 Rutherford County
 B-5876

Figure 3





South face of Bridge 84 (US 74 Bypass West)



North face of Bridge 83 (US 74 Bypass East)



Photographs
Replace Bridge No. 83 and No. 84 on
US 74 Bypass over the Second Broad River
Rutherford County
B-5876

Figure 4

16-01-0086



HISTORIC ARCHITECTURE AND LANDSCAPES NO SURVEY REQUIRED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	B-5876	County:	Rutherford
WBS No.:	48070.1.1	Document Type:	CE
Fed. Aid No:	NHP-0074(181)	Funding:	<input type="checkbox"/> State <input checked="" type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	NWP
Project Description: Replace Bridge No. 83 and 84 on US 74 BYP. EBL over Second Broad River.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

Description of review activities, results, and conclusions:

Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on January 26, 2016. Based on this review, there are no existing NR, SL, LD, DE, or SS properties in the Area of Potential Effects, which is approximately 900' from each end of the bridge and 200' from the center of the Second Broad River each way. A large manufacturing building southwest of the bridges is under fifty years of age. Bridge Nos. 83 and 84, built 1968, are also under fifty years of age and not eligible for National Register listing. There are no National Register listed or eligible properties and no survey is required. If design plans change, additional review will be required.

Why the available information provides a reliable basis for reasonably predicting that there are no unidentified significant historic architectural or landscape resources in the project area:

HPO quad maps and GIS information recording NR, SL, LD, DE, and SS properties for the Rutherford County survey, Rutherford County GIS/Tax information, and Google Maps are considered valid for the purposes of determining the likelihood of historic resources being present. There are no National Register listed or eligible properties within the APE and no survey is required.

SUPPORT DOCUMENTATION

Map(s) Previous Survey Info. Photos Correspondence Design Plans

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes -- NO SURVEY REQUIRED

Kate Hubbel

1/26/2016

NCDOT Architectural Historian

Date

Historic Architecture and Landscapes NO SURVEY REQUIRED form for Minor Transportation Projects as Qualified in the 2007 Programmatic Agreement.

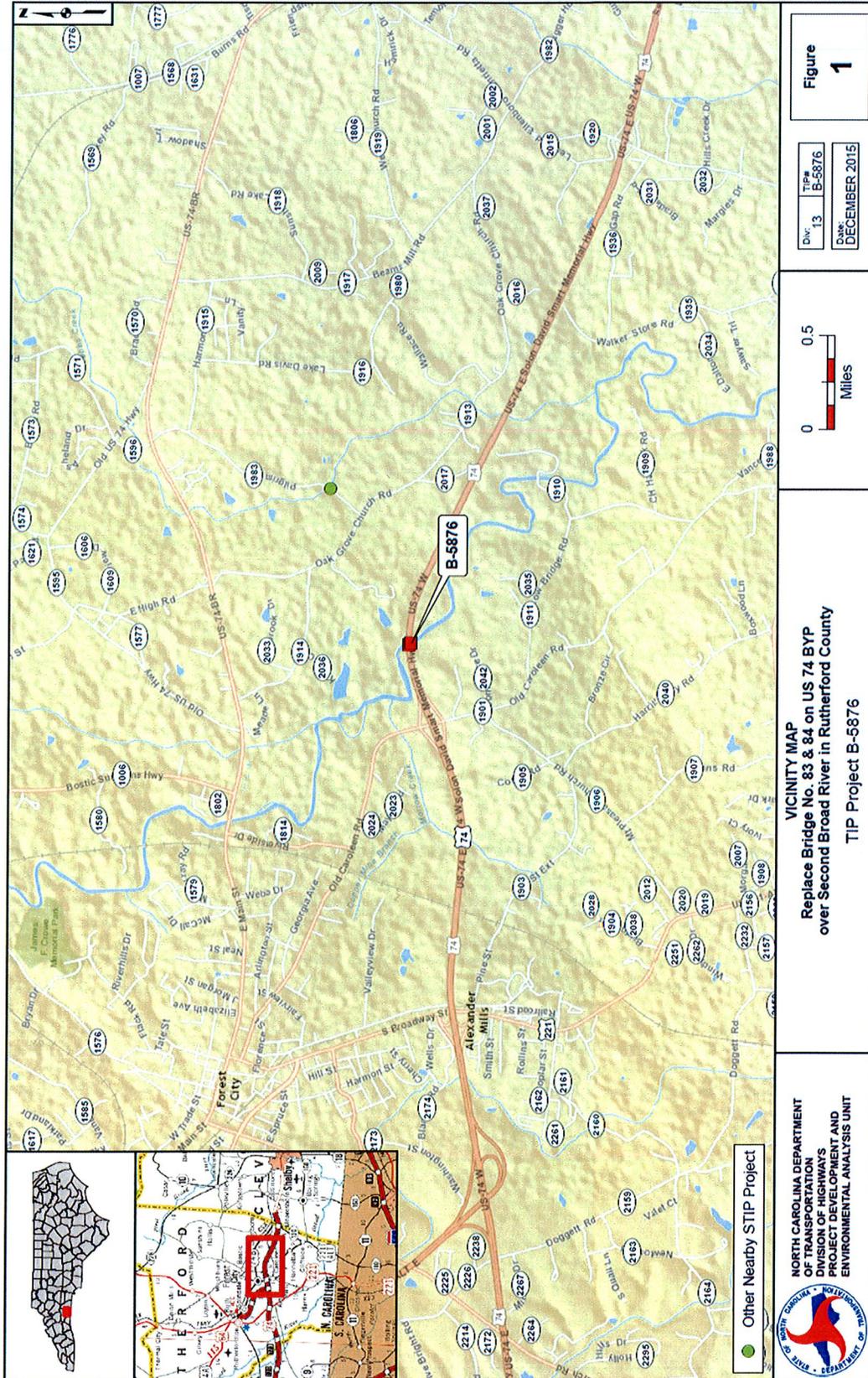


Figure
1

Div: 13
TIP# B-5876
Date: DECEMBER 2015

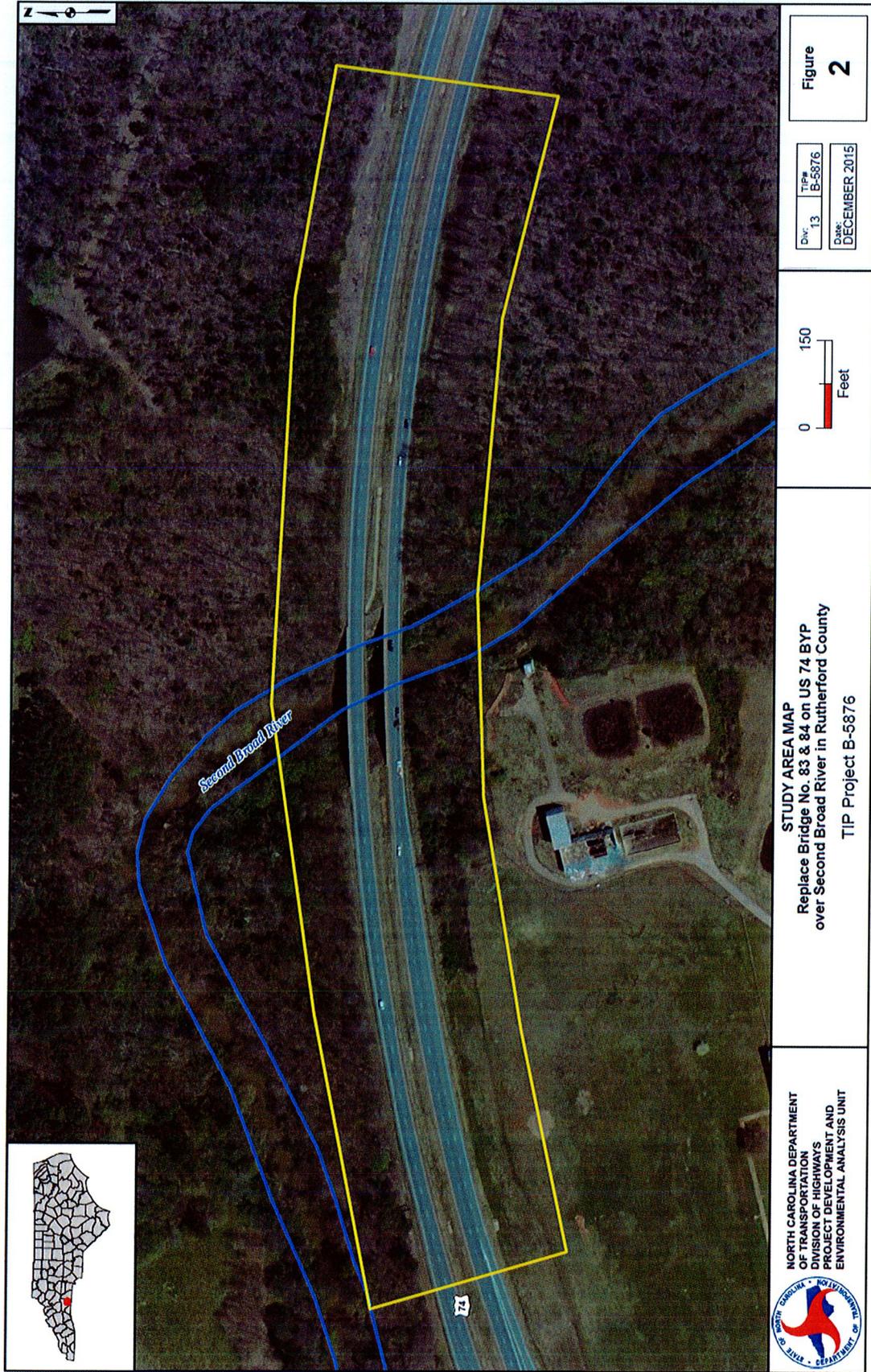
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VICINITY MAP
Replace Bridge No. 83 & 84 on US 74 BYP
over Second Broad River in Rutherford County
TIP Project B-5876

Other Nearby STIP Project

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROJECT DEVELOPMENT AND
ENVIRONMENTAL ANALYSIS UNIT





16-01-0086



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **B-5876** *County:* **Rutherford**
WBS No: **48070.1.1** *Document:* **C E**
F.A. No: **NHP-0074(181)** *Funding:* State Federal
Federal Permit Required? Yes No *Permit Type:* **tbd**

Project Description: NCDOT proposes to replace Bridge Nos. 83 & 84 on US 74 Bypass over the Second Broad River in Rutherford County. The two bridges built along with US 74 in the late 1960s, carry four lanes and will be replaced on a similar alignment using a three phase construction in the existing, wide ROW which is 272 feet at its greatest width at the western launch. While design plans are still under development, four new, 12-foot lanes are proposed will for construction over the Second Broad River. Some new ROW or easements may be required for the staged construction, or fill.

For purposes of the this review, the archaeological Area of Potential Effects (APE) is a length of 2500 feet long along US 74, tapering at opposite ends, and 310 feet wide at the central point of crossing. This is a federally funded and permitted undertaking, therefore Section 106 of the National Historic Preservation Act applies for this review.

SUMMARY OF ARCHAEOLOGICAL REVIEW: NO SURVEY REQUIRED

Brief description of review activities, results of review, and conclusions:

USGS mapping and aerial photography was examined (see Figures 1 and 2). Virtual drive-by using both Bing and Google Maps was examined. Much of the broader area around the APE is wooded and sloped. The northwest quadrant is fairly level and undeveloped while the southwest quadrant heavily modified for very large scale industry, including recently constructed retaining ponds close to the ROW and river.

Morrow Creek is a tributary to the Second Broad River, though about 2000 feet upriver from the bridges. Very close proximity to a tributary of a river generally is favorable for the presence of Native American archaeological sites, however, the distance in this case is probably too great.

Soils units were examined using the USDA Web Soil Survey. Since the project will be replacing the existing facility, the majority of the APE is massively altered due to construction of the current highway and bridges. The eastern soils are recorded as the Pacolet-Bethlehem complex (PbC2 and PbD2, 8-25 percent slopes, moderately eroded). These rolling hillsides are considered less attractive for habitation due to slope and often lack typical archaeological sites. Further, the eroded nature of the soils suggests that preservation of intact archaeological sites would be unlikely. The western half of the project is mostly Udorthents (UdC, 0-15 percent slopes), a descriptor used to define modern, large scale earthmoving as for commercial, industrial and residential use. Survival of any intact, significant archaeological sites that may have been present is unlikely in this location. A small portion immediately west of the river is the Buncombe loamy sand (BuB, 0-5 percent slopes) which is listed as only occasionally flooded. This soil type has greater potential for archaeological sites due to the relatively level landform and drainage qualities. However, only a small percentage of this soil type falls within the APE which is otherwise mostly disturbed.

16-01-0086

A visit to the Office of State Archaeology for background research showed there have been no major environmental reviews in the greater area that resulting in an archaeological survey. ERs in the nearby vicinity include ER 15-2208 (likely linear utility), ER 15-0597 and ER 15-0635. There are no recorded archaeological sites within or next to the APE, or the local vicinity. Note, this does not mean that there are no sites present in this portion of the county as the absence of sites could reflect the lack of investigations. However, it is noteworthy that there have been no recorded sites along this portion of the river.

No obvious cemeteries can be seen in aerial and/or USGS mapping or using the cemetery database managed by NCDOT archaeologist Paul Mohler.

Historic mapping was examined. Earlier versions of USGS mapping (Forest City) do not show US 74 crossing the river at the APE until sometime after 1966. The bridge is reportedly built in 1968 and scanned NCDOT design plans dated 1969 show details of planned construction. Previous historic maps, like the 1924/1928 Rutherford County Soils Map (MC.086.1924u) or the 1923 Complete Map of Rutherford County (MC.086.1923l) shows no crossing of the Second Broad River at this location. The road continues at its original alignment.

The APE will have only minor expansion from the 1960s construction of the two bridges and highway. Almost all of the APE was included in the original construction and now includes the existing transportation features along with fill, likely utilities and drainage control. Soils are noted as being modified for a large portion of the APE, especially at the highway, or sloped and eroded on the east side. A small portion of fair soils are mapped within the APE, though clearly the very wide highway interrupts and challenges that notation. The expansion, if any is likely for fill along the margins of the existing ROW line, a linear swathe of maybe less than 0.22 acres on any one quadrant.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST – *NO SURVEY REQUIRED*


 NCDOT ARCHAEOLOGIST

12/8/2017

Date

16-01-0086

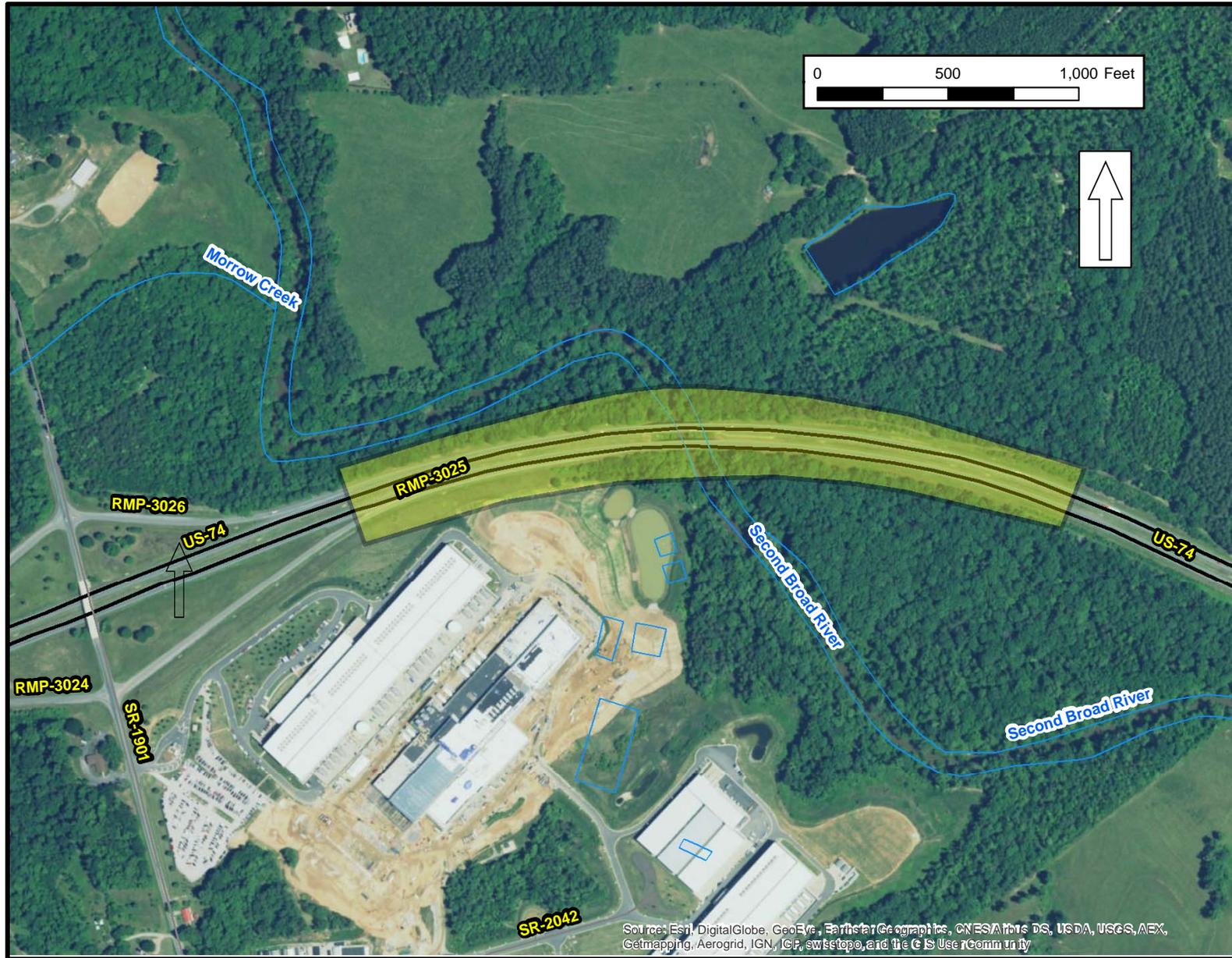


Figure 2. Recent aerial mapping showing immediate surroundings of Bridge Nos. 0083 & 0084, PA 16-01-0086. The APE is in yellow